

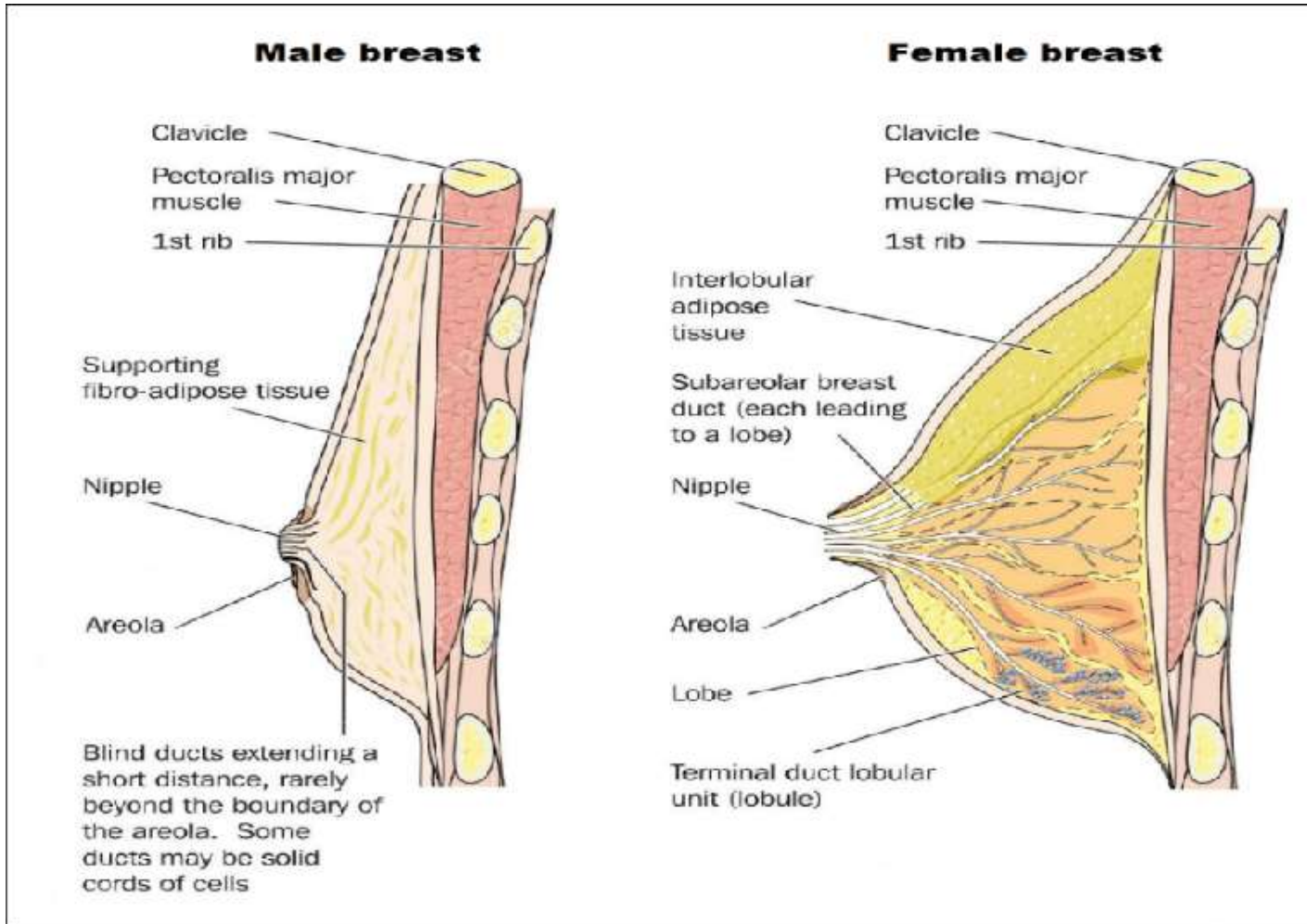
"ULTRASOUND OF THE MALE BREAST. WHAT'S NORMAL AND WHAT'S NOT!"

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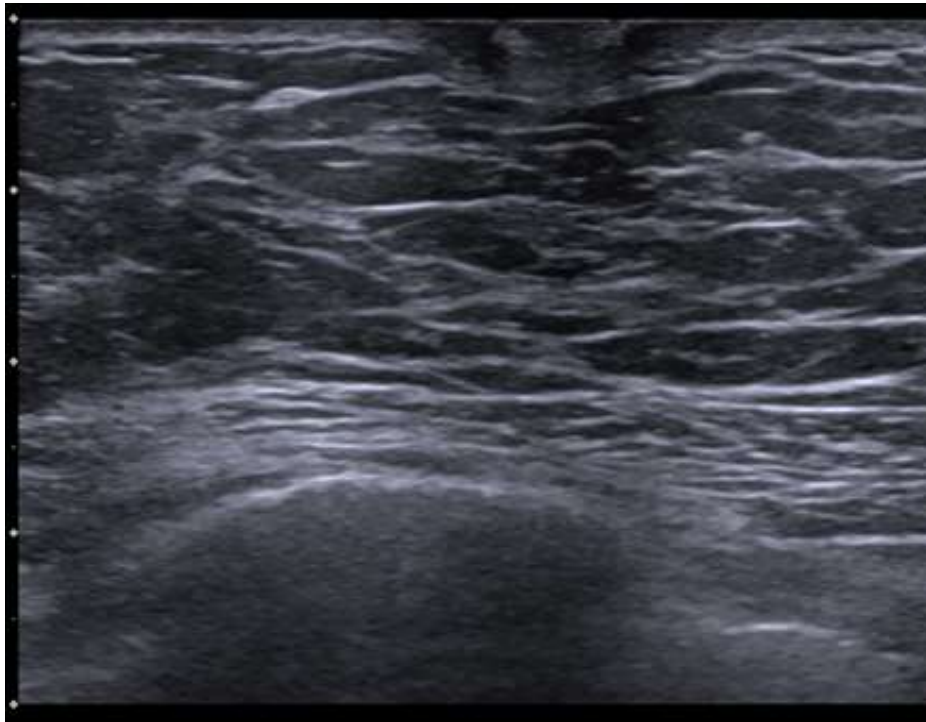
CONTENTS

- ◉ Male breast anatomy
- ◉ Normal male breast appearance
- ◉ Gynaecomastia
- ◉ Male breast cancer
- ◉ Other pathologies found in the male breast
- ◉ Summary

MALE BREAST ANATOMY



NORMAL MALE BREAST- ULTRASOUND APPEARANCE



Skin

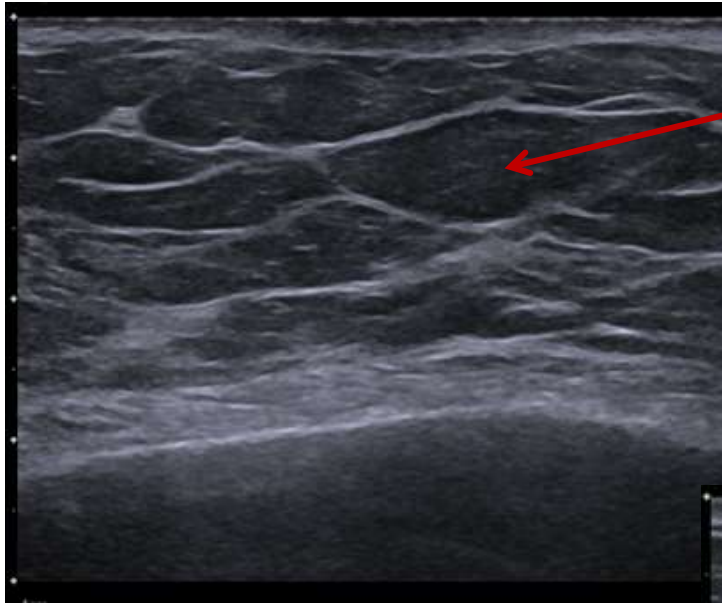
Normal fat lobules and
connective tissue

Muscle

Ribs

Lungs

EXAMPLES

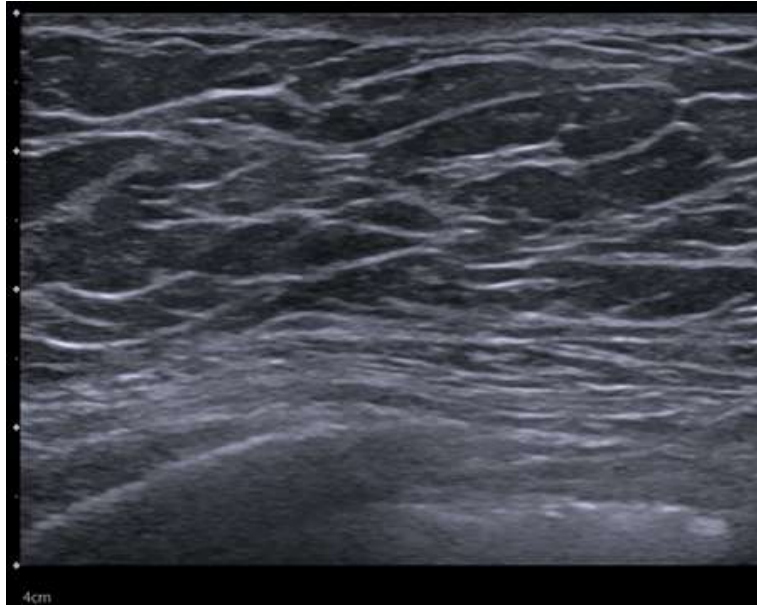


Normal fatty tissue



Normal posterior acoustic shadowing behind nipple

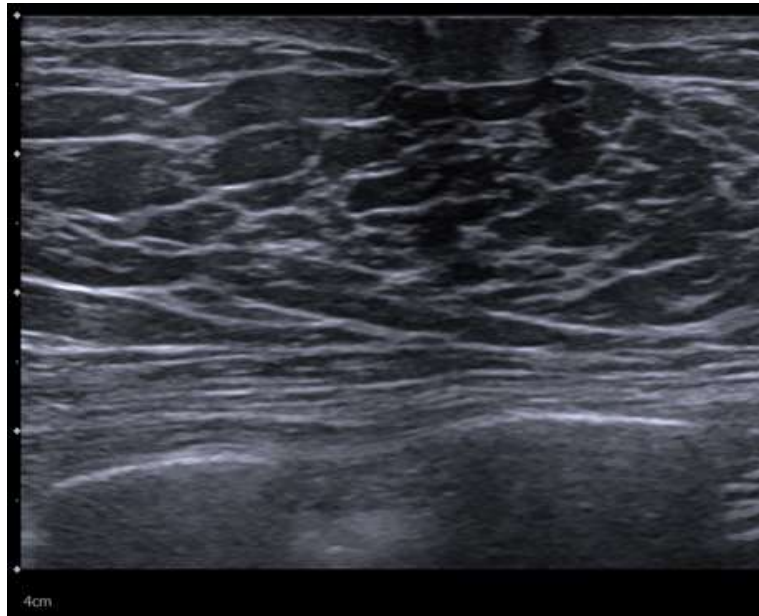
EXAMPLES



Normal fatty tissue



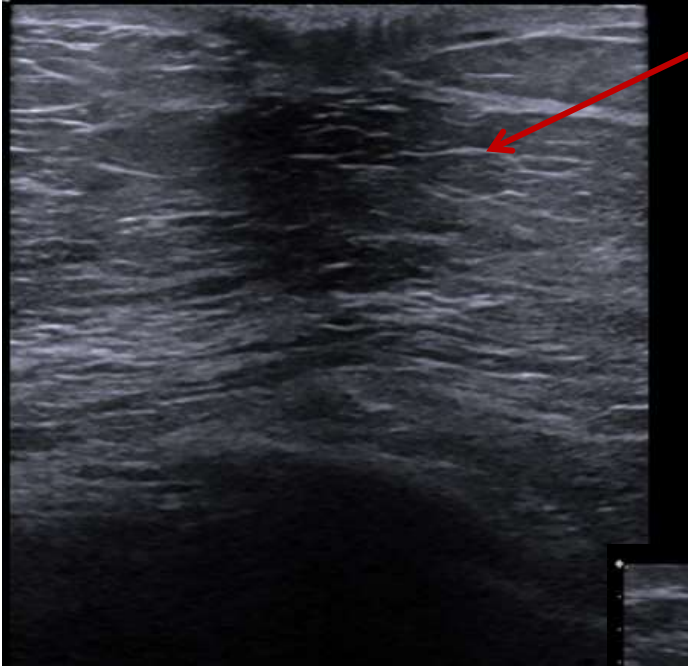
Nipple



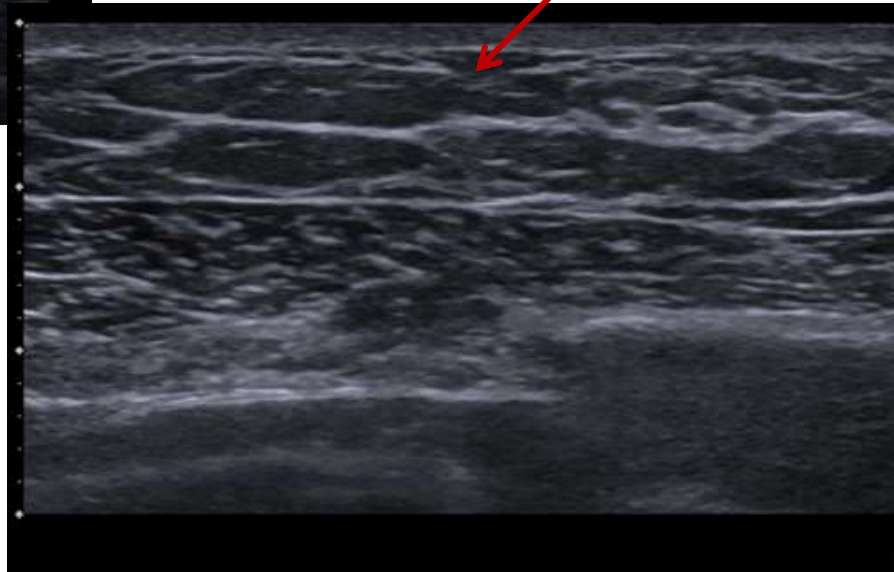
4cm

EXAMPLES

Normal posterior acoustic shadowing behind nipple



Normal fatty tissue



GYNAECOMASTIA

GYNAECOMASTIA

What is it?

- Most common condition that men present with to a breast unit
- Account for approximately 40% of all of all disorders of the male breast
- Non neoplastic enlargement of the breast which occurs due to an imbalance of oestrogen and testosterone
- Results in the enlargement of sub areolar ducts and proliferation of the surrounding stroma.
- Three phases - Acute, Intermediate, Chronic

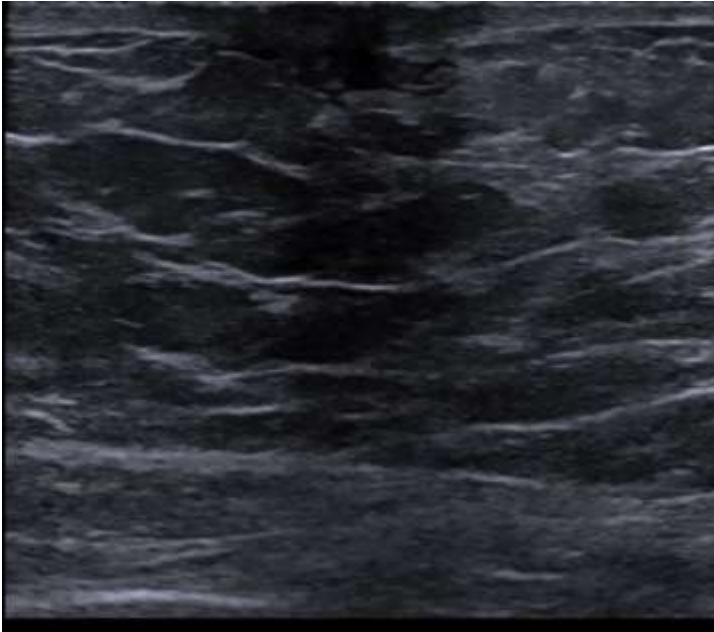
Clinical findings

- Breast appear larger
- Pain within the breast or benign the nipple
- Change in appearance to skin or nipple

Causes

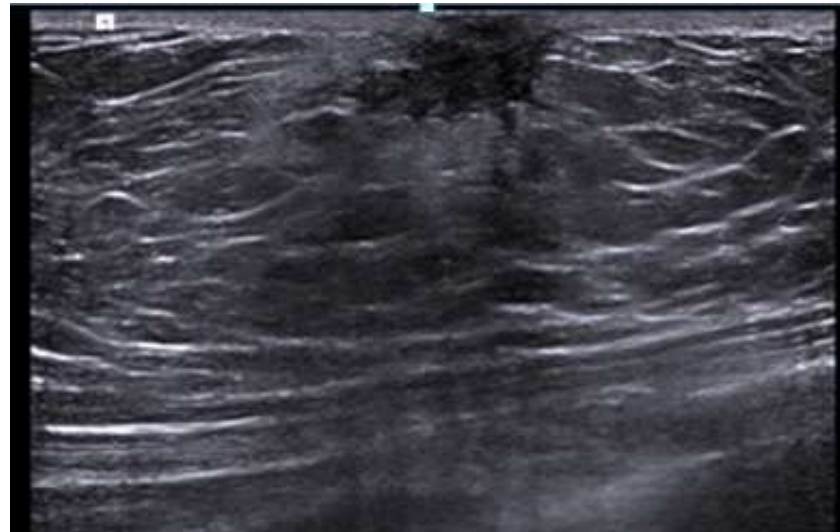
- Hormone changes
- Obesity
- Medications (heart medications, prostate medications)
- Overactive thyroid
- Kidney disease
- Cirrhosis
- Drug abuse (anabolic steroids and illicit drugs)

ULTRASOUND APPEARANCE - MILD GYNAECOMASTIA (ACUTE)

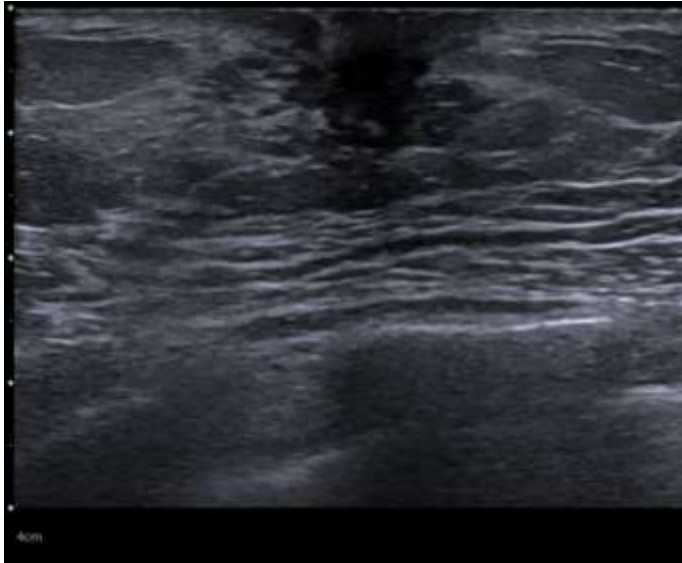


Shows dendritic appearance
which is triangular in shape

Hypoechoic area with
branches extending into
the peripheral adipose
tissue “fingers”

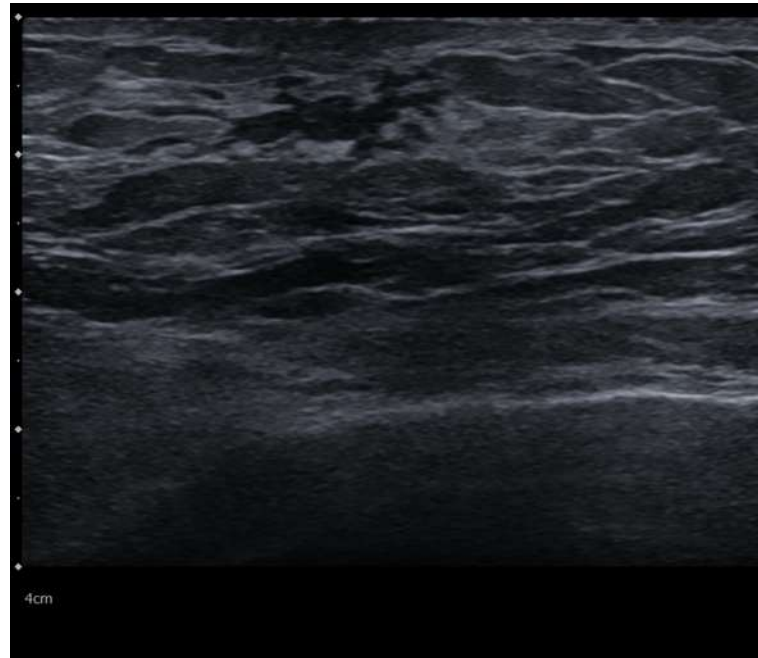


ULTRASOUND APPEARANCE - MILD GYNAECOMASIA

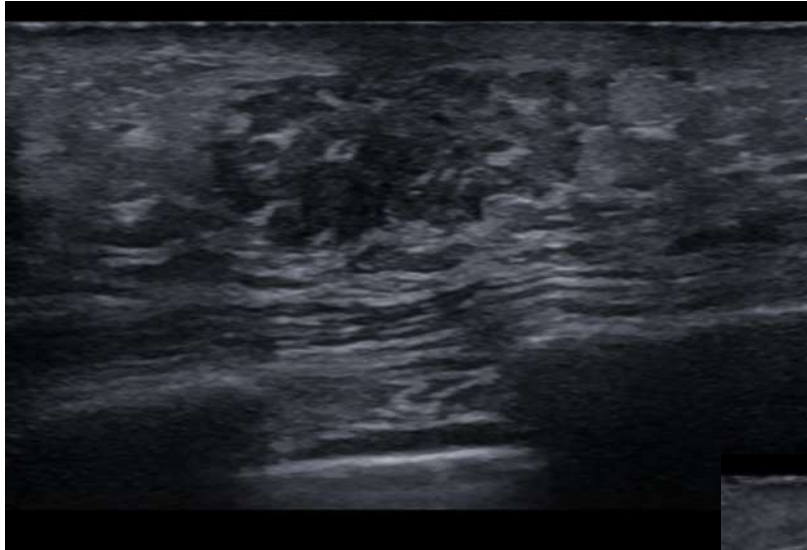


Sub-areola location

Triangular in shape

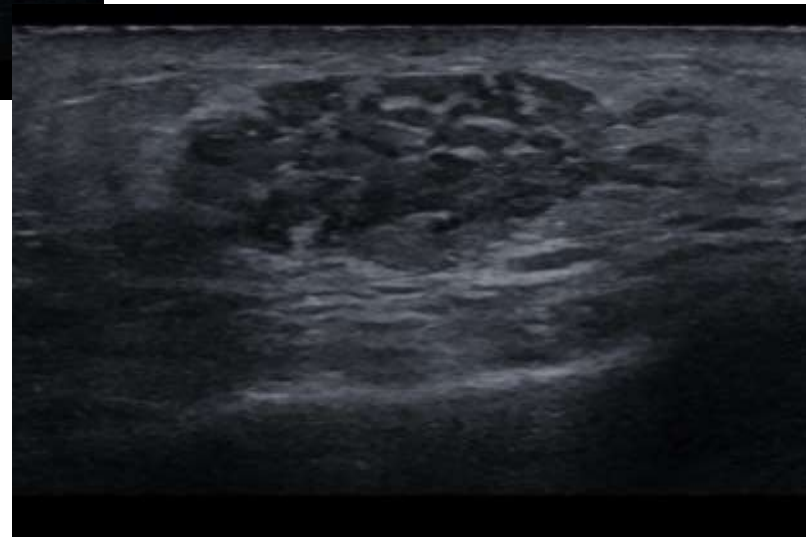


ULTRASOUND APPEARANCE - FLORID GYNAECOMASTIA (CHRONIC)

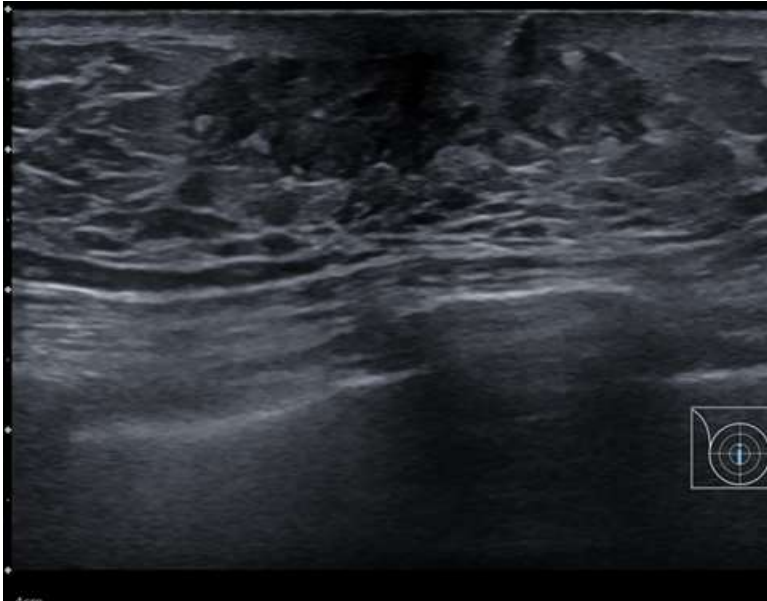


Glandular tissue is diffusely distributed the surrounding adipose tissue

Can resemble the same appearance and female glandular tissue

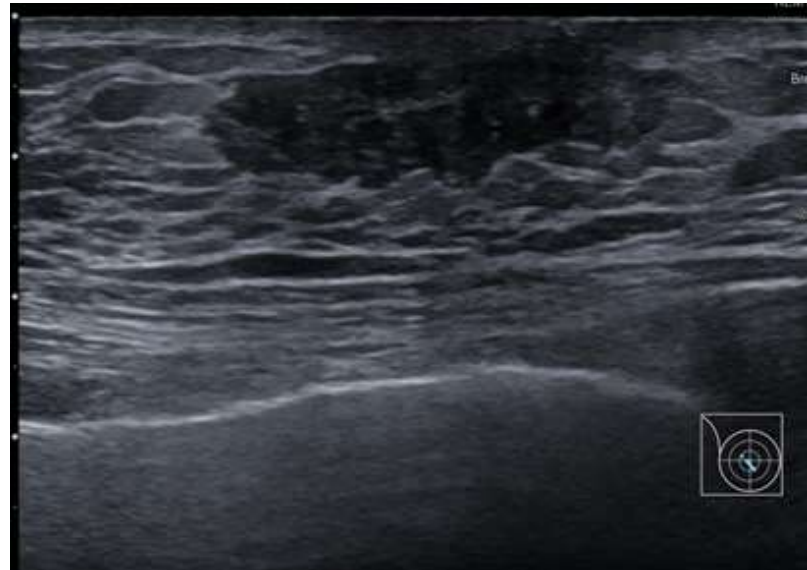


ULTRASOUND APPEARANCE - FLORID GYNAECOMASTIA



More dense hypoechoic
mass surrounded by
enlarged fat lobules

Indicative of florid
gynaecomastia with
surrounding psuedo-
gynaecomastia



MALE BREAST CANCER



MALE BREAST CANCER

Prevalence

Around 370 men are diagnosed with breast cancer per year which account for then that 1% of all breast cancer diagnosed within the UK

Risk factors - similar to that in women

- Age
- Exposure to radiation (radiotherapy)
- Family history
- High levels of oestrogen
- Obesity
- Liver conditions such as cirrhosis
- Thyroid problems
- Klinefelter's syndroms

Symptoms

- Breast lump
- Nipple discharge
- Nipple retraction
- Ulceration on the skin
- Breast swelling

MALE BREAST CANCER - ULTRASOUND APPEARANCES

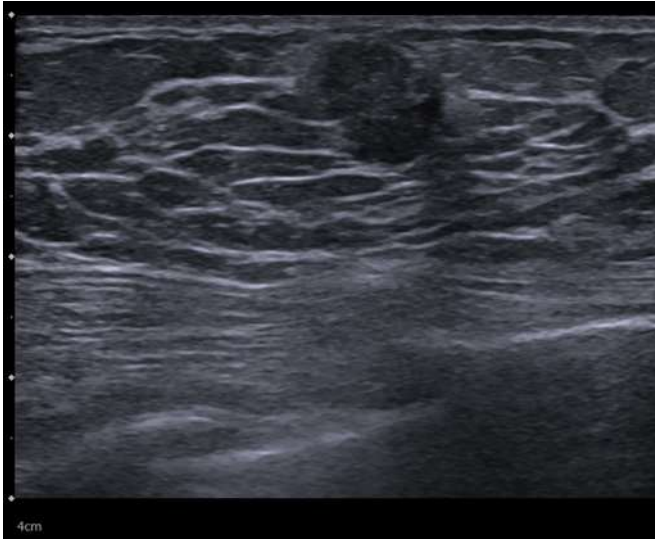
Similar to that of carcinomas
seen in women

- Ill-defined
- Irregular
- Hypoechoic
- Posterior acoustic shadowing

Just inferior to the nipple or
in the surrounding tissue

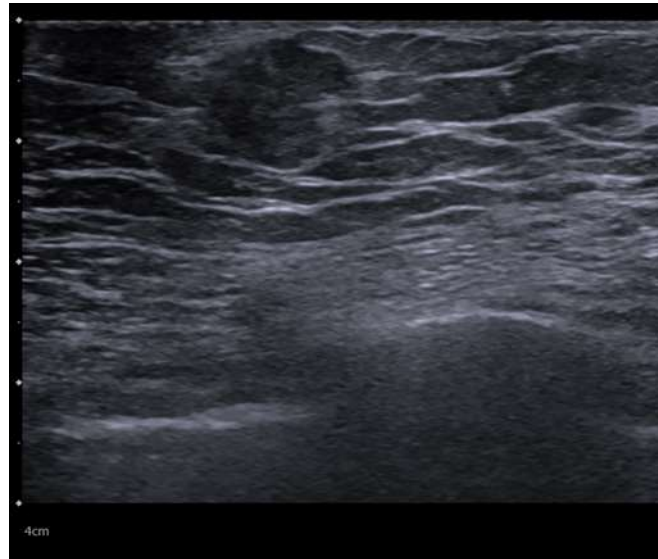
Beware!!
**Appearance can be
mistake as
gynecomastia**

EXAMPLES

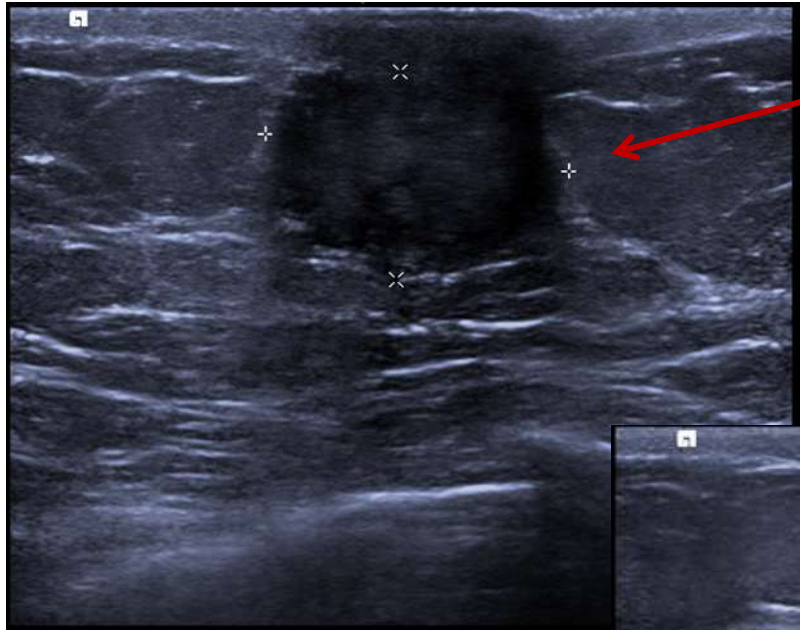


← Ill-defined, irregular,
hypoechoic mass

↓



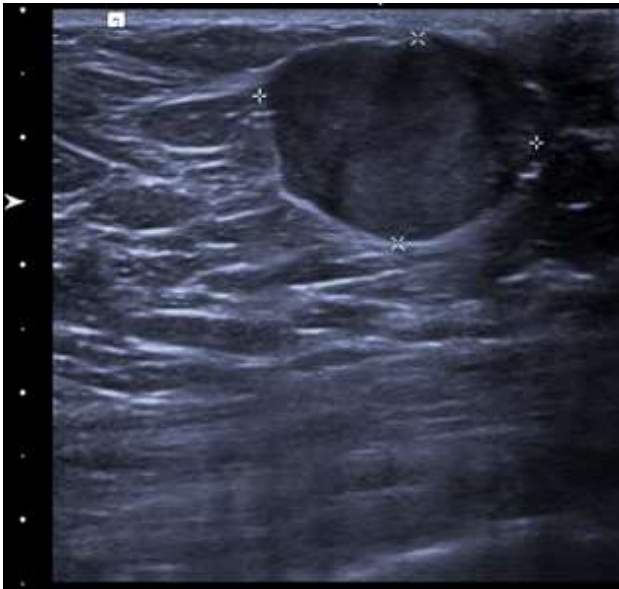
EXAMPLES



Ill-defined hypoechoic mass
inferior to the nipple



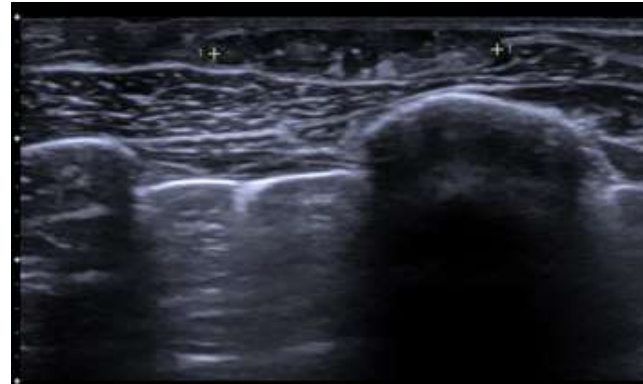
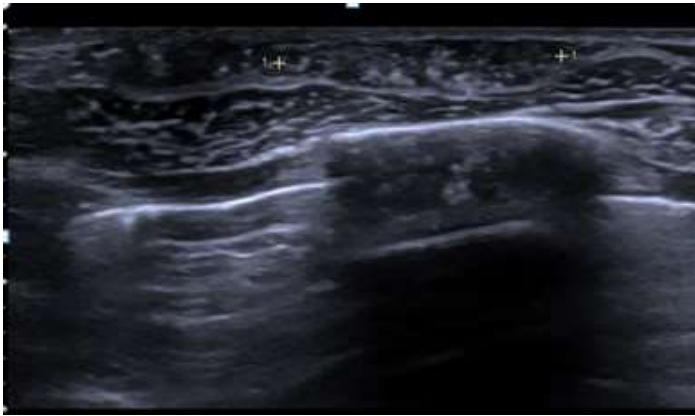
EXAMPLES - INVASIVE DUCTAL CARCINOMA



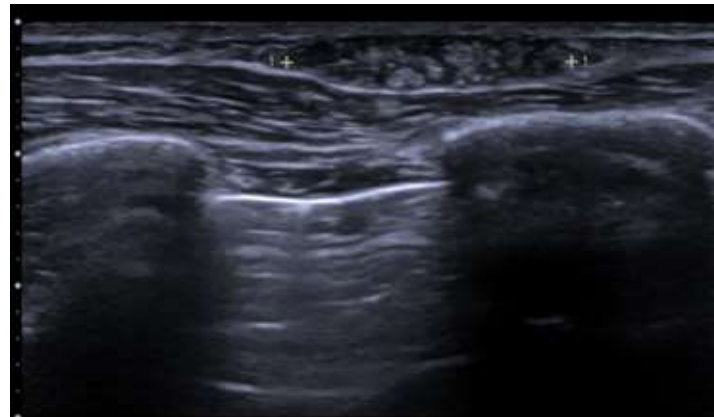
Irregular borders



EXAMPLES - DCIS



Microcalcifications can be seen within the mass

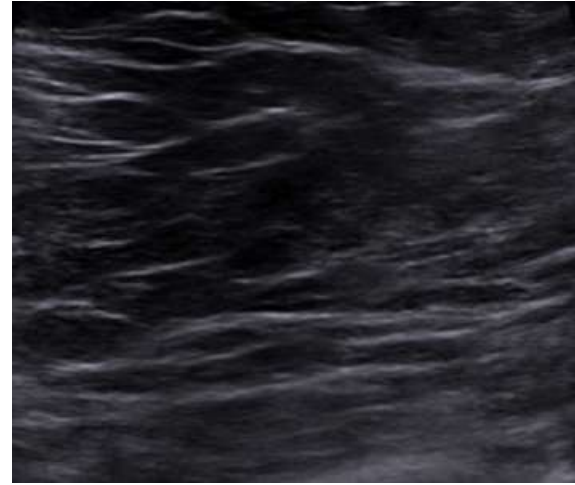


**OTHER
PATHOLOGIES SEEN
WITHIN THE MALE
BREAST**

PSUEDOLOGYNECOMASTIA

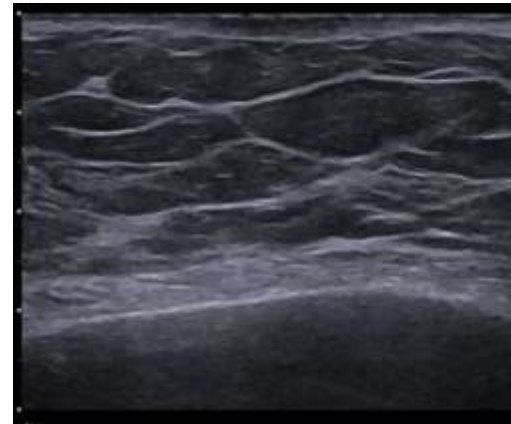
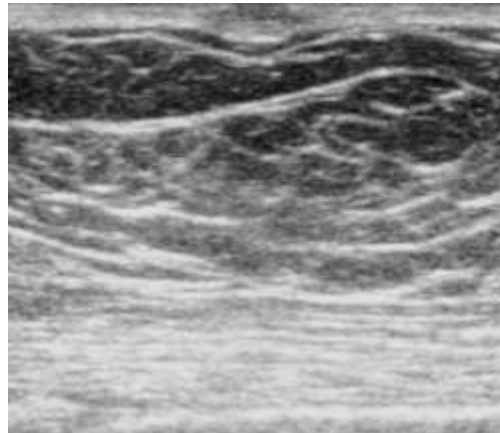
What is it?

- Also known as Adipomastia
- Breast enlargement due to fatty tissue.
- Contains no glandular tissue.
- Usually bilateral in presentation



Ultrasound appearances

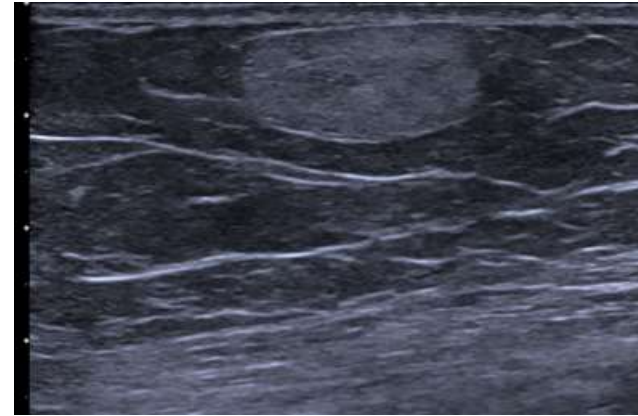
- Multiple enlarged isoechoic fat lobules separated by hyperechoic connective tissue



LIPOMA

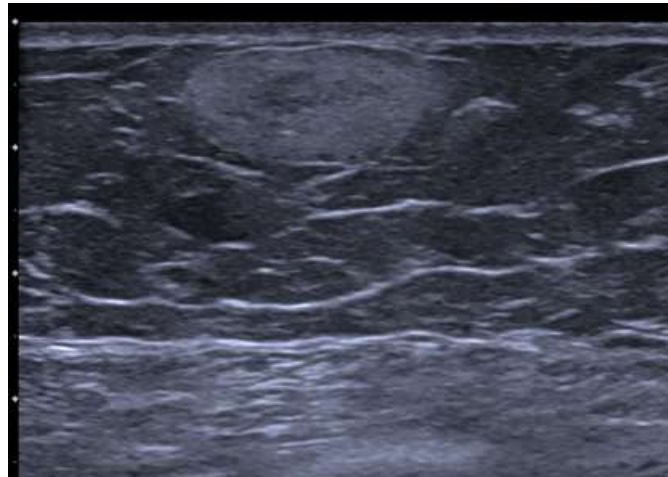
What is it?

- Slow growing benign tumours that arise from the fatty tissue
- Clinically - soft round or oval mass which are often mobile

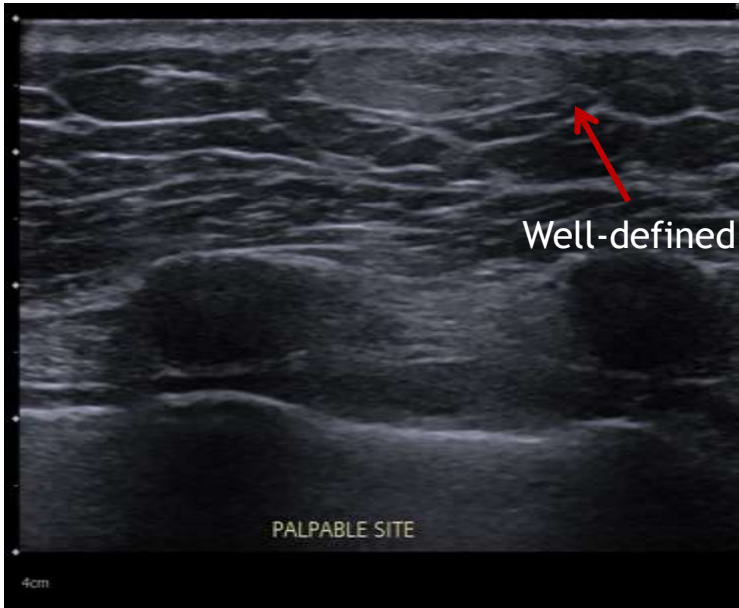
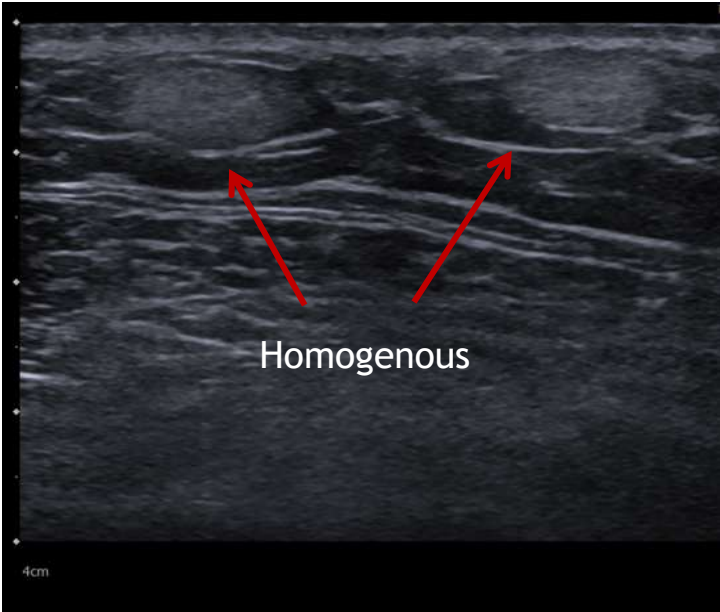


Ultrasound appearance

- Well-defined /well-circumscribed
- oval in shape
- homogenous
- Hyperechoic
- Single or multiple in appearance



MORE EXAMPLES



SEBACEOUS / EPIDERMAL INCLUSION CYSTS

What is it?

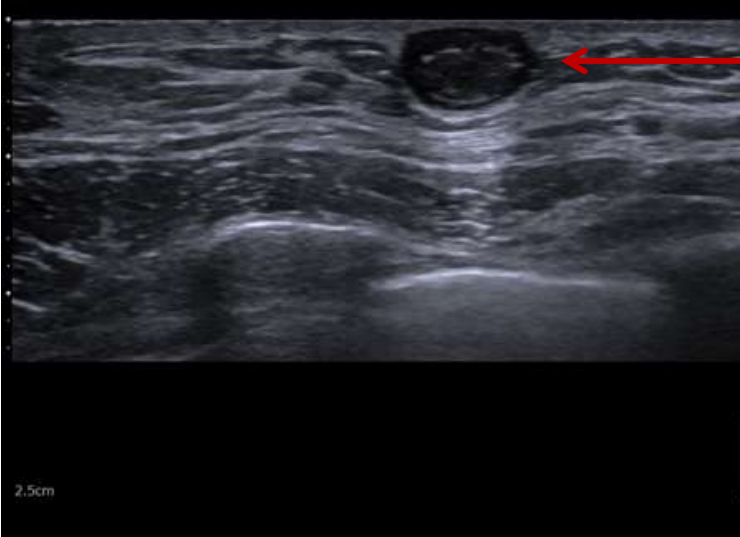
- Benign lesion of the breast that is contained within the skin.
- Occur when glands within the epidermal (skin) layers become obstructed

Ultrasound appearance

- Superficial
- Contained within the skin (unless ruptured)
- Well-defined
- Hypoechoic or anechoic
- May contain low level internal echoes
- Cystic in appearance
- Often shows posterior acoustic enhancement



MORE EXAMPLES



Well-defined, internal echoes

Superficial, contained within the skin



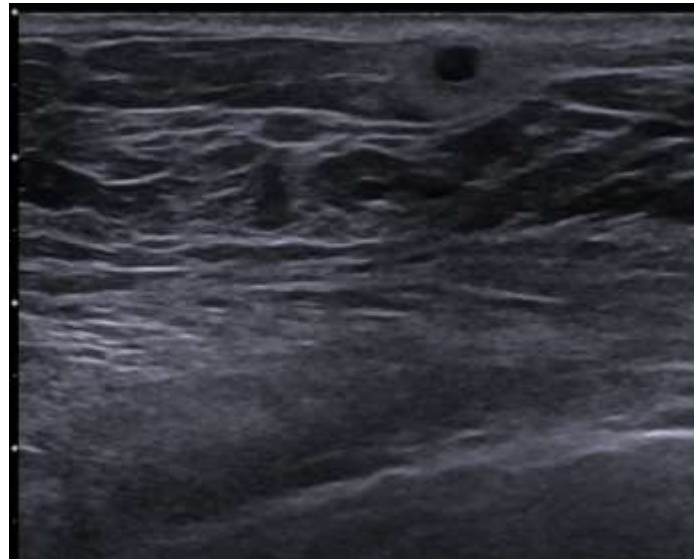
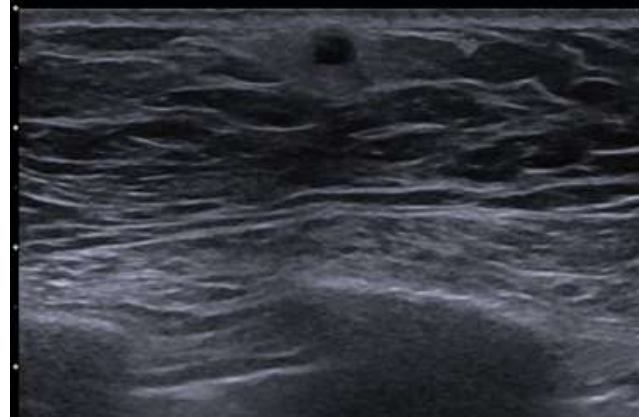
FAT NECROSIS

What is it?

- Break down of the lipomatous tissue into fatty acids and glycerol
- Usually associated by trauma and bruising

Ultrasound Appearance

- Complex heterogenous
- Hyperechoic with hypoechoic or anechoic components
- Tend to lie superficial (depending on the type of trauma)



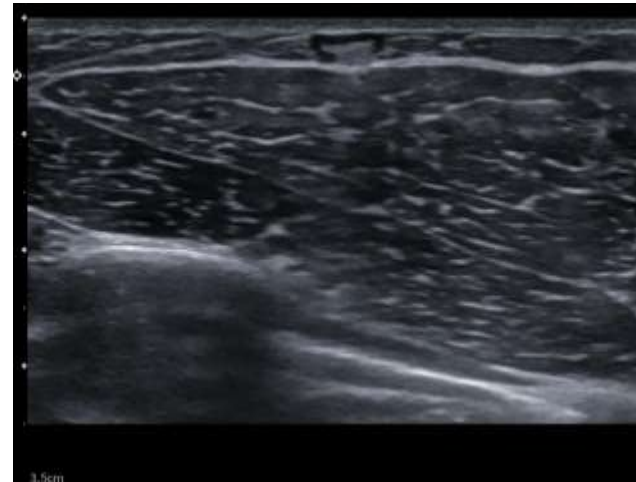
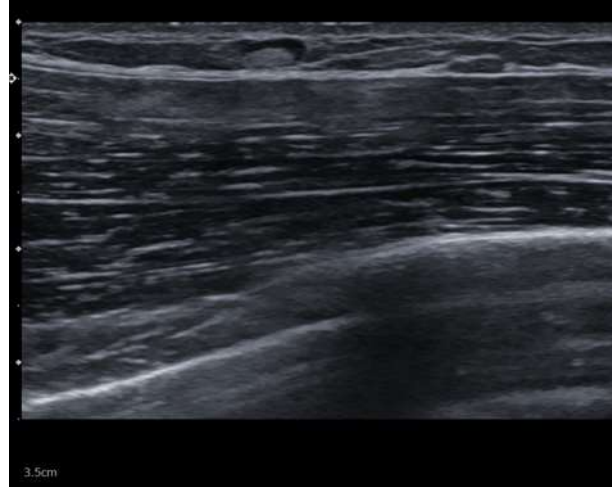
INTRAMAMMARY LYMPH NODES

What is it?

- Lymph node which lies within the breast tissue

Ultrasound appearance

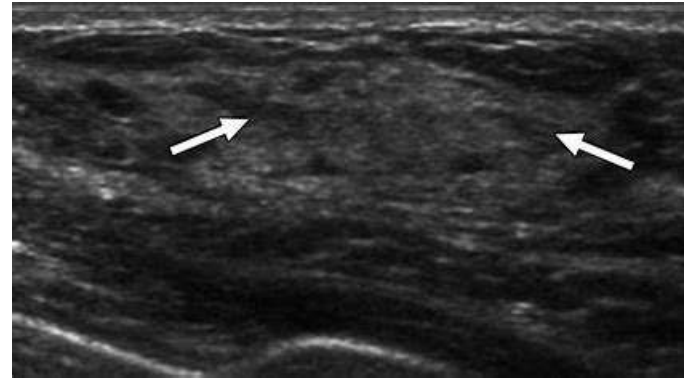
- Same appearance as lymph nodes within the axilla
- Well-defined
- Oval or “bean shaped”
- Thin hypoechoic rim representing the cortex
- Hyperechoic centre which represents the fatty hilum



PSEUDOANGIOMATOUS STROMAL HYPERPLASIA (PASH)

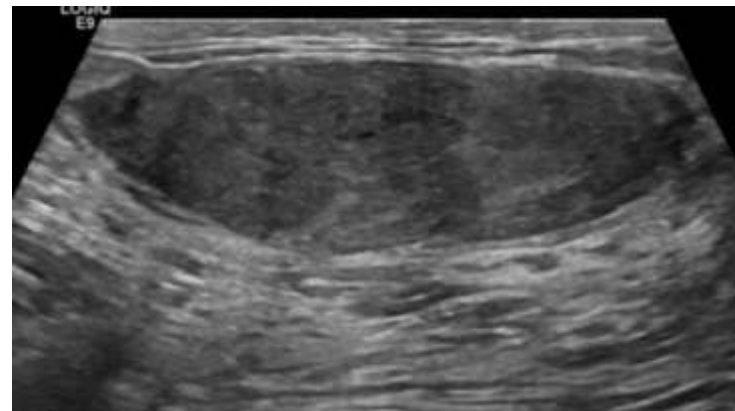
What is it?

- Very rare in male!!
- Abnormal cellular proliferation of the myofibroblastic cells
- Results in a focal overgrowth of stromal tissue.
- Exact cause is unknown



Ultrasound appearance

- Have a varied appearance
- Hypoechoic mass with circumscribed margins
- Complex cystic and solid mass
- Can mimic a focus of glandular gynaecomastia



INTRADUCTAL PAPILLOMAS

What is it?

- Benign fibroepithelial tumours that occur with ducts
- Caused by the abnormal proliferation of ductal epithelial cells
- Can be either solitary or multiple
- Very rare in men!!

Ultrasound appearance

- Well-defined
- Cystic and solid lesion
- Can exhibit ductal extension
- May lie adjacent to the nipple



BEWARE!!

- Pectoral implants for men.
 - Cosmetic
 - Transgender
- Inserted to enhance the appearance is the pectoral muscle.
- Made from a firmer form of silicone (silicone rubber) compared to that of a breast implant.
- Feels harder than the female breast implant



Ultrasound appearance

- Similar in appearance to silicone breast implants just smaller
- May appear as if the implant is displaced



SUMMARY

- ◉ Any pathology which occurs in female breasts can occur in male breast.
- ◉ Gynaecomastia is the most common presentation in male attending breast clinics
- ◉ If you see a focus of possible glandular gynaecomastia that does not arise for the nipple. Do not ignore it!!
- ◉ Always take into account patient age, habitus and medications when determining your diagnosis - things may not be as straight forward as you may think!

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THANK



THANK YOU FOR
LISTENING